ACC.12
61st Annual Scientific Session & Expo
ACC-i2 with TCT innovation in intervention

E612
JACC March 27, 2012
Volume 59, Issue 13

# Arrhythmias

## TREATMENT OF OBSTRUCTIVE SLEEP APNEA REDUCES THE RISK OF ATRIAL FIBRILLATION RECURRENCE FOLLOWING CATHETER ABLATION

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 9:30 a.m.-10:30 a.m.

Session Title: Arrhythmias: AF/SVT: Outcomes after Catheter Ablation of Atrial Arrhythmias
Abstract Category: 16. Arrhythmias: AF/SVT
Presentation Number: 1237-183

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**Background:** The association between obstructive sleep apnea (OSA) and atrial fibrillation (AF) is well established, and OSA has been also implicated in greater recurrence rates after catheter ablation. However, whether therapy of OSA reduces the risk of AF recurrence following ablation is still unknown. The aim of this study was to investigate whether treatment of OSA reduces the risk of AF recurrence following ablation.

**Methods:** We studied 426 consecutive patients with paroxysmal AF referred for index circumferential pulmonary vein isolation (PVI) between July 2006 and July 2010. Diagnosis of OSA was based on a positive polysomnography study defined by the apnea hypopnea index >15 per hour, and >80% of all apnea/hypopnea events had to be obstructive. Patients with OSA were divided by CPAP use. All patients in the CPAP group had been treated with a nocturnal nasal CPAP therapy for a minimum of 3 months before the procedure and continued treatment for the duration of the follow-up period. All patients underwent PVI with demonstration of entrance and exit block. The mean follow-up period was 26 months. Recurrence of AF was determined by cardiac event monitoring at the first 3 months, and then by scheduled office electrocardiograms and patient's symptoms.

**Results:** Fifty two patients (12.2%) in this series had OSA. Among these patients, 28 (53%) were treated with continuous positive airway pressure (CPAP) while 24 (46%) were not. At the end of the follow-up period (26±18 months), 72% of the CPAP and 62% of the non-CPAP group were free of AF (P=0.005). Treatment with CPAP was an independent predictor of improved outcome, as multivariable analysis showed no significant difference between the groups in regard to the presence of hypertension, diabetes, basal metabolic index, left atrial size, or therapy with antiarrhythmic drugs. Moreover, patients with treated OSA experienced AF recurrence rates that was similar similar to a matched control group of patients without OSA (72% vs. 70%, P=ns).

**Conclusions:** Treatment of OSA with CPAP improves the success rate of catheter ablation and therefore merits special consideration when evaluating patients for AF ablation